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INVITED COMMENTARY

Spontaneous Embolisation in Asymptomatic and Recently Symptomatic Patients with TIA/Minor Stroke

G.J. de Borst*, F.L. Moll

Steenen Camer 37, 3721 NA Bilthoven, The Netherlands

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This observational study presents the findings of preoperative Transcranial Doppler in a series of recently symptomatic and asymptomatic patients with carotid stenosis. Results show a higher rate of spontaneous embolisation (SE) in recently symptomatic compared to asymptomatic patients. Of patients with SE, 23% suffered recurrent non-invalidating cerebrovascular events. Probably of even more importance, it showed that 12% of patients without SE suffered recurrent symptoms. In other words; an SE-free TCD registration does not exclude recurrent symptoms. Varying time between index event and TCD, and relatively short TCD monitoring time of 30 min might be the explanation. In the 33 asymptomatic patients, 6% (2) had SE, but no events occurred (0/33).

The relation between symptomatology, SE, and recurrent symptoms can be summarized as follows, based on this and previous reports:[1,2]

1. Recently symptomatic patients have a higher rate of ipsilateral TCD measured emboli;
2. Recently symptomatic patients have a higher risk of recurrent symptoms;
3. Detection of emboli in the ipsilateral MCA is associated with increased (recurrent) stroke risk.

From a histological point of view, these findings are in line with the observation that plaque vulnerability is related to severity of the index event, with most vulnerability in patients with prior stroke, and the least number of vulnerable plaques in patients with an asymptomatic presentation.[3]

Despite over 70% of patients being operated within 14 days of the index event, and 43% within 7 days, still a horrifying 14.6% of patients suffered recurrent cerebral ischaemic events between admission and surgery. Although not confirmed in this report, we consider that all 18 recurrent events occurred ipsilaterally. On each occasion the secondary (recurrent event) was the same as the primary clinical event (TIA = 14, AF = 4) and no invalidating recurrent symptoms occurred within the present cohort. Unfortunately, specification of index events in the 123 symptomatic patients was not provided, and the actual number of patients included with initial minor stroke remains unclear.

From Table 4 it might be concluded that if all symptomatic patients would have been treated within 14 days, eight recurrent events might have been prevented. Despite, still 10 events would have occurred, with 7 out of these 10 not being prevented when all patients would have been operated on within 7 days. Furthermore, if more aggressive antiplatelet or anticoagulation therapy would have been provided based on the occurrence of SE, at best 7 events would have been prevented in 31 patients with SE. On the contrary, still 11 events would have occurred in 92 patients without SE. SE based intervention therefore seems not indicated.

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* Corresponding author. Tel.: +31 6 21540910; fax: +31 30 2509111.
E-mail address: gjdeborst@hotmail.com (G.J. de Borst).

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Although the clinical impact of this analysis seems limited, the most important message is that it once more emphasizes the need for expedited carotid endarterectomy. Recently symptomatic patients should be treated within 14 days (and probably within 72 h of the index event in the future) in order to prevent more strokes in the long term.

References

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